

REMARKS

In the non-final Office Action, dated October 28, 2005, the Examiner rejects claims 25-46 under 35 U.S.C. § 103(a) as unpatentable over SHANKAR et al. (U.S. Patent No. 6,570,869) in view of PURCELL et al. (U.S. Patent No. 6,094,578). Applicants respectfully traverse this rejection.

The three basic criteria for establishing a *prima facie* case of obviousness are articulated in M.P.E.P. § 2142. First, there must be some suggestion or motivation, either in the reference(s) themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim features. SHANKAR et al. and PURCELL et al. do not teach or suggest features recited in claims 25-46.

For example, claim 25 is directed to a method for establishing a telephone call. The method includes receiving a call establishment request, mapping a nature of address indicator from a first format to a second format, and establishing the telephone call based on the mapping. SHANKAR et al. and PURCELL et al. do not disclose or suggest this combination of features.

For example, SHANKAR et al. and PURCELL et al. do not disclose or suggest mapping a nature of address indicator from a first format to a second format. The Examiner admits that SHANKAR et al. does not disclose this feature and relies on col. 3, lines 5-14, col. 4, lines 50-57, the Abstract, and Figs. 6a-6c of PURCELL et al. for allegedly disclosing the above feature of claim 25 (Office Action, pg. 2). Applicants respectfully disagree with the Examiner's interpretation of PURCELL et al.

At col. 3, lines 5-14, PURCELL et al. discloses:

It is an object of the present invention to convert signals in a format associated with a first international communications network into a different format required by a second international communications network. It is an object of the present invention to process the translation of a subscriber's global title address from the type of global title addressing used by a first communications network into the type required by the second communications network.

This section of PURCELL et al. discloses the conversion of signals in a format associated with a first international communications network into a different format required by a second international communications network. This section of PURCELL et al. does not disclose or suggest mapping a nature of address indicator from a first format to a second format, as recited in claim 25.

At col. 4, lines 50-57, PURCELL et al. discloses:

Preferably, the necessary protocol conversions are accomplished through the use of look-up tables or conversion tables. The conversion tables contain the necessary information for translating messages from the North American message format into the foreign message format, and visa versa. Alternatively, protocol conversion could also be implemented through the use of neural networks or digital signal processing elements.

This section of PURCELL et al. discloses the use of conversion tables for translating messages from the North American message format into a foreign message format. This section of PURCELL et al. does not disclose or suggest mapping a nature of address indicator from a first format to a second format, as recited in claim 25.

In the Abstract, PURCELL et al. discloses:

A gateway unit which acts to provide interoperability between disparate mobile communications networks. The gateway unit provides the necessary protocol conversions between the different mobile networks. The gateway unit can be a stand-alone unit or co-located with a mobile switching center (MSC) within North America or in foreign country. In each case, the gateway unit serves as an interconnection point between two or more networks. For example, the gateway

unit converts messages from European networks, which use the International Telecommunications Union (ITU) and mobile global title (MGT) protocols to North American networks, which use the American National Standards Institute (ANSI) and international mobile station identity address (IMSI) protocols, and vis versa. The gateway unit preferably includes the elements of a processor, software and memory, all of which could be provided on a circuit board or in a conventional personal computer. Preferably, the conversions are performed through the use of a series of look-up tables, stored in the memory. Once the incoming messages, from a first communications network, have been converted, subsequently, they are forwarded to their destination in the second communications network.

This section of PURCELL et al. discloses protocol conversion between different mobile networks. This section of PURCELL et al. does not disclose or suggest mapping a nature of address indicator from a first format to a second format, as recited in claim 25.

Figs. 6a-6c depict mapping tables used in the translation of ANSI SCCP global title formats and values into ITU SCCP global title formats and values. These figures (and their corresponding description) specifically disclose that the translation of an ANSI SS7 protocol to an ITU SS7 protocol is based on a translation type value. For example, at col. 8, lines 4-9, PURCELL et al. specifically discloses, with reference to Fig. 6a:

The gateway unit 90 performs this translation by equating the Translation Type=9 (123) to the Numbering Plan=ITU E.212 (125), Encoding Scheme=BCD Odd/Even 127, and Nature of Address Indicator=International 129, used in the ITU SS7 protocol.

(Emphasis added). Therefore, in stark contrast to the above feature of claim 25, PURCELL et al. discloses the mapping of a translation type value to numbering plan, encoding scheme, and nature of address indicator values of a different protocol. PURCELL et al. does not disclose or suggest mapping a nature of address indicator from a first format to a second format, as recited in claim 25.

Since SHANKAR et al. and PURCELL et al. do not disclose or suggest mapping a nature

of address indicator from a first format to a second format, SHANKAR et al. and PURCELL et al. cannot disclose or suggest establishing a telephone call based on the mapping, as also recited in claim 25.

SHANKAR et al. and PURCELL et al. do not disclose or suggest the combination of features recited in claim 25. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 25.

For at least the foregoing reasons, Applicants submit that claim 25 is patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination.

Claims 26-29 depend from claim 25. Therefore, these claims are patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 25. Moreover, these claims recite additional features not disclosed or suggested by SHANKAR et al. and PURCELL et al.

For example, claim 26 recites mapping a numbering plan indicator from the first format to the second format. The Examiner admits that SHANKAR et al. does not disclose this feature and relies on Figs. 6a-6c and col. 7, line 65, to col. 8, line 35, of PURCELL et al. for allegedly disclosing the above feature of claim 26 (Office Action, pg. 4). Applicants respectfully disagree with the Examiner's interpretation of PURCELL et al.

As set forth above, PURCELL et al.'s Figs. 6a-6c depict mapping tables used in the translation of ANSI SCCP global title formats and values into ITU SCCP global title formats and values. These figures (and their corresponding description) specifically disclose that the translation of an ANSI SS7 protocol to an ITU SS7 protocol is based on a translation type value. For example, at col. 8, lines 4-9, PURCELL et al. specifically discloses, with reference to Fig.

6a:

The gateway unit 90 performs this translation by equating the Translation Type=9 (123) to the Numbering Plan=ITU E.212 (125), Encoding Scheme=BCD Odd/Even 127, and Nature of Address Indicator=International 129, used in the ITU SS7 protocol.

(Emphasis added). Therefore, in stark contrast to the above feature of claim 26, PURCELL et al. discloses the mapping of a translation type value to numbering plan, encoding scheme, and nature of address indicator values of a different protocol. PURCELL et al. does not disclose or suggest mapping a numbering plan indicator from the first format to the second format, as recited in claim 26.

At col. 7, line 65, to col. 8, line 35, PURCELL et al. discloses:

FIGS. 6a-6c show three examples of the mapping tables used in the second translation of the ANSI SCCP global title formats and values into the ITU SCCP global title formats and values. FIG. 6a shows an example of the translation of an ANSI SS7 protocol with Translation Type=9 (123) into its equivalent ITU SS7 protocol, and visa versa. The gateway unit 90 performs this translation by equating the Translation Type=9 (123) to the Numbering Plan=ITU E.212 (125), Encoding Scheme=BCD Odd/Even 127, and Nature of Address Indicator=International 129, used in the ITU SS7 protocol. Similarly, the processor 100 equates the Numbering Plan=ITU Recommendation E.212 (125), Encoding Scheme=BCD Odd/Even 127, and Nature of Address Indicator=International 129, into the Translation Type=9 (123). FIGS. 6b and 6c show conversion tables for the Translation Type=10 (130) and Translation Type=X (140). Translation Type=10 (130) identifies a Numbering Plan=ITU Recommendation E.164 (133), and Translation Type=X (140) identifies Numbering Plan=E. 214 (143). The value of X can be any value uniquely used to identify a Number Plan=ITU Recommendation E.214 (143).

Address Translation

Prior to forwarding the authentication and registration message to the foreign subscriber's home location register, the gateway unit 90 must perform the translation of the IMSI global title address to the MGT global title address. As mentioned above, the type of global title addressing used in the North American network is International Mobile Station Identity (IMSI) 92, as defined by ITU recommendation E.212, herein incorporated by reference. The type of global title

addressing used in the foreign networks is Mobile Global Title (MGT), as defined in ITU Recommendation E.214, herein incorporated by reference.

The gateway unit's 90 process of translating the subscriber's global title address is shown in FIG. 7. The first step of the process is for the gateway unit 90 to receive the foreign subscriber's IMSI global title address 152.

This section of PURCELL et al. discloses, as discussed above, the mapping of a translation type value to numbering plan, encoding scheme, and nature of address indicator values of a different protocol. This section of PURCELL et al. does not disclose or suggest mapping a numbering plan indicator from the first format to the second format, as recited in claim 26.

Since SHANKAR et al. and PURCELL et al. do not disclose or suggest the above feature of claim 26, a *prima facie* case of obviousness has not been established with respect to claim 26.

For at least these additional reasons, Applicants submit that claim 26 is patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination.

Claim 28 recites that the first format includes a session initiation protocol format. The Examiner continues to rely on col. 1, lines 25-37, and col. 4, line 50, to col. 5, line 27, of SHANKAR et al. for allegedly disclosing this feature (Office Action, pg. 4). At the outset, Applicants note that the Examiner admits that SHANKAR et al. does not disclose mapping a nature of address indicator from a first format to a second format. Therefore, it is unclear how the Examiner can reasonably rely on SHANKAR et al. for disclosing that the first format includes a session initiation protocol format. Applicants note that PURCELL et al. does not disclose or suggest a session initiation protocol format.

Nonetheless, at col. 1, lines 25-37, SHANKAR et al. discloses:

Over the decades, however, major voice carriers have invested heavily in developing a Signaling System 7 (SS7) signaling and switching infrastructure to offer reliable telephone service. This infrastructure includes countless systems for

billing, provisioning, maintenance, and databases that are compatible only with SS7. These systems are commonly referred to "legacy systems," a term that also includes other proprietary protocols such as ISDN_PRI, DPNSS, ISUP, TUP, NUP, H.323, and SIP. Due to the substantial investment in the legacy systems, it is desirable to keep the legacy systems in operation, yet still take advantage of the newer packet technologies.

This section of SHANKAR et al. discloses that the term "legacy systems" includes SIP. This section of SHANKAR et al. in no way discloses or suggests mapping a nature of address indicator from a first format to a second format, where the first format includes a session initiation protocol (SIP) format. In fact, this section of SHANKAR et al. in no way relates to mapping.

At col. 4, line 50, to col. 5, line 27, SHANKAR et al. discloses that originating signaling unit 120 and terminating signaling unit 140 convert the legacy protocols, such as SIP, of originating node 100 and terminating node 160 into messages for communicating with one another and for controlling a coding unit over control lines 114 and 154. This section of SHANKAR et al. in no way discloses or suggests that the conversion of legacy protocols includes mapping a nature of address indicator from SIP to a second format, as recited in claim 28.

Since SHANKAR et al. and PURCELL et al. do not disclose or suggest the above feature of claim 28, a *prima facie* case of obviousness has not been established with respect to claim 28.

For at least these additional reasons, Applicants submit that claim 28 is patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination.

Claim 29 recites that the second format includes one of signaling system 7 (SS7) format, integrated services digital network (ISDN) format, ISDN user part (ISUP) format, or channel associated signaling (CAS) format. The Examiner relies on col. 1, lines 25-37, and col. 4, line

50, to col. 5, line 27, of SHANKAR et al. for allegedly disclosing this feature (Office Action, pg.

4). At the outset, Applicants note that the Examiner admits that SHANKAR et al. does not disclose mapping a nature of address indicator from a first format to a second format. Therefore, it is unclear how the Examiner can reasonably rely on SHANKAR et al. for disclosing the second format including one of SS7 format, ISDN format, ISUP format, or CAS format.

Nonetheless, col. 1, lines 25-37, of SHANKAR et al. is reproduced above. This section of SHANKAR et al. discloses the term "legacy systems" includes ISDN_PRI, DPNSS, ISUP, TUP, NUP, H.323, and SIP. This section of SHANKAR et al. in no way discloses or suggests mapping a nature of address indicator from a first format to a second format, where the second format includes one of SS7 format, ISDN format, ISUP format, or CAS format. In fact, this section of SHANKAR et al. in no way relates to mapping.

At col. 4, line 50, to col. 5, line 27, SHANKAR et al. discloses that originating signaling unit 120 and terminating signaling unit 140 convert the legacy protocols, such as DPNSS, ISDN_PRI, SS7/C7 (including ISUPs, TUPs, and NUPs), H.323, SIP, or CAS, of originating node 100 and terminating node 160 into messages for communicating with one another and for controlling a coding unit over control lines 114 and 154. This section of SHANKAR et al. in no way discloses or suggests that the conversion of legacy protocols includes mapping a nature of address indicator from a first format to one of SS7 format, ISDN format, ISUP format, or CAS format, as recited in claim 29.

For at least these additional reasons, Applicants submit that claim 29 is patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination.

Independent claim 30 is directed to a method for establishing a telephone call. The

method includes receiving a call establishment request, mapping a numbering plan indicator from a first format to a second format, and establishing the telephone call based on the mapping. SHANKAR et al. and PURCELL et al. do not disclose or suggest this combination of features.

For example, SHANKAR et al. and PURCELL et al. do not disclose or suggest mapping a numbering plan indicator from a first format to a second format. The Examiner admits that SHANKAR et al. does not disclose this feature and relies on col. 3, lines 5-14, col. 4, lines 50-57, the Abstract, and Figs. 6a-6c of PURCELL et al. for allegedly disclosing the above feature of claim 25 (Office Action, pg. 2). Applicants respectfully disagree with the Examiner's interpretation of PURCELL et al.

Col. 3, lines 5-14, of PURCELL et al. is reproduced above. This section of PURCELL et al. discloses the conversion of signals in a format associated with a first international communications network into a different format required by a second international communications network. This section of PURCELL et al. does not disclose or suggest mapping a numbering plan indicator from a first format to a second format, as recited in claim 30.

Col. 4, lines 50-57, of PURCELL et al. is reproduced above. This section of PURCELL et al. discloses the use of conversion tables for translating messages from the North American message format into a foreign message format. This section of PURCELL et al. does not disclose or suggest mapping a numbering plan indicator from a first format to a second format, as recited in claim 30.

The Abstract of PURCELL et al. is reproduced above. This section of PURCELL et al. discloses protocol conversion between different mobile networks. This section of PURCELL et al. does not disclose or suggest mapping a numbering plan indicator from a first format to a

second format, as recited in claim 30.

Figs. 6a-6c depict mapping tables used in the translation of ANSI SCCP global title formats and values into ITU SCCP global title formats and values. These figures (and their corresponding description) specifically disclose that the translation of an ANSI SS7 protocol to an ITU SS7 protocol is based on a translation type value. For example, at col. 8, lines 4-9, PURCELL et al. specifically discloses, with reference to Fig. 6a:

The gateway unit 90 performs this translation by equating the Translation Type=9 (123) to the Numbering Plan=ITU E.212 (125), Encoding Scheme=BCD Odd/Even 127, and Nature of Address Indicator=International 129, used in the ITU SS7 protocol.

(Emphasis added). Therefore, in stark contrast to the above feature of claim 25, PURCELL et al. discloses the mapping of a translation type value to numbering plan, encoding scheme, and nature of address indicator values of a different protocol. PURCELL et al. does not disclose or suggest mapping a numbering plan indicator from a first format to a second format, as recited in claim 30.

Since SHANKAR et al. and PURCELL et al. do not disclose or suggest mapping a numbering plan indicator from a first format to a second format, SHANKAR et al. and PURCELL et al. cannot disclose or suggest establishing a telephone call based on the mapping, as also recited in claim 30.

SHANKAR et al. and PURCELL et al. do not disclose or suggest the combination of features recited in claim 30. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 30.

For at least the foregoing reasons, Applicants submit that claim 30 is patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination

Claims 31-34 depend from claim 30. Therefore, these claims are patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 30. Moreover, these claims recite additional features not disclosed or suggested by SHANKAR et al. and PURCELL et al.

For example, claims 31-34 recite features similar to (yet possibly of different scope than) features described above with respect to claims 25-29. Therefore, these claims are patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination, for at least reasons similar to reasons given above with respect to claims 25-29.

Independent claims 35, 39, 43, and 44 recite features similar to (yet possibly of different scope than) features described above with respect to claims 25 and 30. Therefore, these claims are patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination, for at least reasons similar to reasons given above with respect to claims 25 and 30.

Claims 36-38 depend from claim 35. Therefore, these claims are patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 35. Moreover, these claims recite features similar to (yet possibly of different scope than) features described above with respect to claims 26-29. Therefore, these claims are also patentable over SHANKAR et al. and PURCELL et al. for at least reasons similar to reasons given above with respect to claims 26-29.

Claims 40-42 depend from claim 39. Therefore, these claims are patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 39. Moreover, these claims recite

features similar to (yet possibly of different scope than) features described above with respect to claims 26-29. Therefore, these claims are also patentable over SHANKAR et al. and PURCELL et al. for at least reasons similar to reasons given above with respect to claims 26-29.

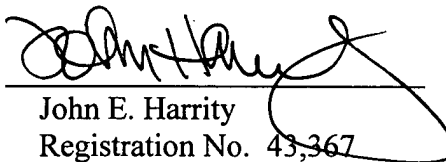
Claims 45 and 46 depend from claim 44. Therefore, these claims are patentable over SHANKAR et al. and PURCELL et al., whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 44. Moreover, these claims recite features similar to (yet possibly of different scope than) features described above with respect to claims 26-29. Therefore, these claims are also patentable over SHANKAR et al. and PURCELL et al. for at least reasons similar to reasons given above with respect to claims 26-29.

In view of the foregoing remarks, Applicants respectfully request the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 13-2491 and please credit any excess fees to such deposit account.

Respectfully submitted,

HARRITY SNYDER, L.L.P.

By: 
John E. Harrity
Registration No. 43,367

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11350 Random Hills Road
Suite 600
Fairfax, Virginia 22030
(571) 432-0800